REMARKS

Enclosed herewith in full compliance with 37 C.F.R. §§1.821-1.825 is a Substitute Sequence Listing to be inserted into the specification as indicated above. The Substitute Sequence Listing in no way introduces new matter into the specification. Also submitted herewith in full compliance with 37 C.F.R. §§1.821-1.825 is a disk copy of the Substitute Sequence Listing. The disk copy of the Sequence Listing, file "2007-05-07 0933-0258PUS1.ST25.txt", is identical to the paper copy, except that it lacks formatting.

The Sequence Listing is amended to identify the present application by filing date and serial number and to correct minor formatting errors. The Sequence Listing is further amended to include SEQ ID NOs: 22-191 which are presented in tables 3 and 5. The specification is amended to identify each nucleotide sequence with a corresponding SEQ ID NO. No new matter is introduced by these amendments.

Furthermore, Applicants note that the Claims have already been amended pursuant to Article 34 of the PCT. Amended Sheets under Article 34 were submitted on October 14, 2005. Copies of these Amended Sheets are attached hereto. The Amended Sheets change the total claim count to 11 claims. Thus, extra claims fees are not required in the present application. However, if necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: May 7, 2007

Respectfully submitted,

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Attachments:

Disk Copy of Sequence Listing
Paper Copy of Sequence Listing
Copy of Article 34 Amended Sheets (2 pages)

We claim:

1. A method for incorporating nucleic acid segments into cellular nucleic acid of an isolated mammalian target cell, the method comprising the step of:

delivering into the mammalian target cell an *in vitro* assembled Mu transposition complex that comprises (i) MuA transposases and (ii) a transposon segment that comprises a pair of Mu end sequences recognised and bound by MuA transposase and an insert sequence between said Mu end sequences, under conditions that allow integration of the transposon segment into the cellular nucleic acid.

2. The method according to claim 1, wherein said Mu transposition complex is delivered into the target cell by electroporation.

3. The method according to claim 1, wherein the nucleic acid segment is incorporated to a random or almost random position of the cellular nucleic acid of the target cell.

4. The method according to claim 1, wherein the nucleic acid segment is incorporated to a targeted position of the cellular nucleic acid of the target cell.

5. The method according to claim 1, wherein the target cell is a human cell.

6. The method according to claim 1, wherein said animal cell is a mouse cell.

7. The method according to claim 1, wherein said insert sequence comprises a marker, which is selectable in mammalian cells.

8. The method according to claim 1, wherein a concentrated fraction of Mu transposition complexes are delivered into the target cell.

9. The method according to claim 1 further comprising the step of incubating the target cells under conditions that promote transposition into the cellular nucleic acid.

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10. A method for forming an insertion mutant library from a pool of mammalian target cells, the method comprising the steps of:

a) delivering into a mammalian target cell an *in vitro* assembled Mu transposition complex that comprises (i) MuA transposases and (ii) a transposon segment that comprises a pair of Mu end sequences recognised and bound by MuA transposase and an insert sequence with a selectable marker between said Mu end sequences, under conditions that allow integration of the transposon segment into the cellular nucleic acid; and

b) screening for cells that comprise the selectable marker.

11. A kit for incorporating nucleic acid segments into cellular nucleic acid of a mammalian target cell comprising a concentrated fraction of Mu transposition complexes with a transposon segment that comprises a marker, which is selectable in mammalian cells.